

ADDITIONS TO THE FLORA OF  
NEWFOUNDLAND. II

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ABSTRACT

Two significant additions have been made to the native vascular flora of Newfoundland as a result of explorations on the Great Northern Peninsula: *Cardamine bellidifolia* L. and *Salix cordata* Michx.

Key Words: Vascular plant flora, additions, Newfoundland

Our understanding of the vascular flora of Newfoundland rests largely on the work of M. L. Fernald (1911, 1926, 1933), and of E. Rouleau (1978, unpublished distribution maps and compiled herbarium records). As a result of their considerable contributions, and a long history of botanical exploration by other botanists that began with the voyage of Sir Joseph Banks in 1766, today, the flora of the island is relatively well known. Even so, parts of the island remain poorly explored, particularly the more inaccessible interior plateau regions, and exciting new discoveries will continue to be made as botanists further explore this vast territory.

Our research on the rare vascular plants of the island (Bouchard et al., 1991), and our earlier work on the flora of the west coast and Gros Morne National Park, have resulted in the addition of many new records to the native flora of the province (Hay et al., 1990). In 1991, we pursued our investigations on the rare plants and general flora in Port au Choix National Historic Park and the region of Canada Bay on the Great Northern Peninsula. Included in this report are notes on the habitat and distribution of two remarkable species that were collected for the first time on the island during these field explorations. Both species must be added to the list of rare plants of Newfoundland (Bouchard et al., 1991).

***Cardamine bellidifolia* L.**

SPECIMENS. White Bay North Distr.: Chimney Bay, Cloud Hill, 1991/08/08, Bouchard, Hay, Brouillet & Jean 91417 (CAN, MT).



*Cardamine bellidifolia* is a circumpolar, arctic-alpine plant ranging as far south in the Cordillera of western North America as northern California, whereas in the east, it lies mostly to the north of 55 latitude N (northern Québec/Labrador Peninsula, Ellesmere Is., Greenland). Rare disjunct occurrences are found southward in Maine (Mt. Katahdin, West Baldwin), New Hampshire (Mt. Washington), and in the Shickshock Mountains of Québec's Gaspé Peninsula (Crow, 1982; Scoggan, 1978-79).

At Chimney Bay, Cloud Hill is a high, barren, wind-swept mountain (alt. 1147 ft.) lying along the northern reaches of the Long Range Mountains. At several sites near the summit, *Cardamine bellidifolia* was discovered growing in moist cracks of the barren siliceous bedrock. The tiny plants were most inconspicuous and fewer than fifty individuals were observed.

The discovery of this species on the Great Northern Peninsula of Newfoundland adds yet another species to an already impressive list of wide-ranging, arctic-alpine plants that are restricted to the Long Range Mountains or to the northern tip of the Peninsula; some of these include *Lycopodium alpinum* L., *Oxyria digyna* (L.) Hill, *Ranunculus pedatifidus* J.E. Sm. ex Rees, *Salix herbacea* L., *Saxifraga rivularis* L., and *Sibbaldia procumbens* L. These arctic-alpine species have ranges extending southward in the eastern part of the continent to isolated or disjunct alpine habitats such as occur in the mountains of the Long Range of western Newfoundland, the Shickshocks of Québec, and outposts in northern New England.

### ***Salix cordata* Michx.**

[syn.: *S. adenophylla* Hook., *S. syrticola* Fern.]

SPECIMENS. St. Barbe South Distr.: Pointe Riche Peninsula, pond south of Port au Choix Cove, 1991/08/01, Bouchard, Hay, Brouillet & Jean 91106 (CAN, GH, MT).

The range of *Salix cordata* extends from southern Hudson Bay and James Bay (Ontario, Québec), southward to the lower Great Lakes (Ontario, Illinois, Michigan), with isolated occurrences eastwards in Québec, southern Labrador and northern Maine (Soper and Heimbürger, 1982). Although *S. cordata* has been attributed to the flora of Newfoundland, its presence there has never been substantiated (G. Argus, pers. comm.). All previous reports, including those of Fernald, are based on misidentifica-



tions of specimens presently referred to *S. eriocephala* Michx. (*S. rigida* Muhl.; *S. cordata* Muhl., not Michx.) or *S. glaucophylloides* Fern. (*S. myricoides* Muhl.), and on misapplication of the name *S. cordata* Michx. to specimens identified as *S. cordata* Muhl., a synonym of *S. eriocephala*.

The discovery of Heart-leaved willow in Port au Choix National Historic Park is the first authentic report for the island of Newfoundland. Despite the confusion which appears to reign among herbarium specimens, *Salix cordata* is an unmistakably distinctive willow, particularly in the field, where its form and foliage are quite striking. The population, which appears to consist of a single clone of about fifty individuals, was found in an open, minerotrophic larch fen, bordering a large pond.

The Port au Choix Peninsula harbors several other rare or noteworthy species of willows that occur in different habitats on the limestone barrens, including *Salix arctophila* Cockerell, *S. ballii* Dorn, *S. lanata* L. ssp. *calcicola* (Fern. & Wieg.) Hult., *S. myrtillifolia* Anderss., *S. pedunculata* Fern., *S. reticulata* L., and *S. wiegandii* Fern.

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